UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,629	01/08/2007	Venkatesh Vadde	873.0139.U1(US)	1308

29683 7590 10/15/2008

HARRINGTON & SMITH, PC
4 RESEARCH DRIVE, Suite 202
SHELTON, CT 06484-6212

EXAMINER	
PERILLA, JASON M	

ART UNIT	PAPER NUMBER
2611	

MAIL DATE	DELIVERY MODE
10/15/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/567,629	VADDE ET AL.	
	Examiner	Art Unit	
	JASON M. PERILLA	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 July 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7 and 9-41* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7,9 and 12-37* is/are rejected.

7)☒ Claim(s) *10,11 and 38-41* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02 August 2007* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-7 and 9-41 are pending in the instant application.

Response to Arguments

2. Applicant's arguments filed July 14, 2008 have been fully considered. In view of the Applicant's remarks, new prior art rejections are set forth below.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 2, 5-7, 23, 29-31, and 34-37 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kornfeld et al (U.S. Pat. No. 5974041; "Kornfeld" – previously cited) in view of Kenington (U.S. Pub. No. 2003/0132800 – newly cited) and Chethik et al (U.S. Pat. No. 6593827; "Chethik" – IDS paper February 7, 2006).

Regarding claim 1, Kornfeld discloses a power synthesizer (fig. 2) comprising: a plurality of n stages in parallel with one another (fig. 2, refs. "A1-A4"), wherein n is an integer at least equal to two, each of the n stages comprising: a discrete amplitude amplifier (fig. 2, ref. "A1") in series with a modulator (not shown; "from an RF transmit modulator"; col. 4, line 51), each nth discrete amplitude amplifier for applying a gain (col. 5, lines 10-30; fig. 2); and, an actuator (fig. 2, ref. 44) adapted to simultaneously switch the n modulators (col. 4, lines 50-60). In Kornfeld's embodiment of figure 2, each amplifier "A1-A4" is disclosed to have "identical" gain (col. 5, lines 10-15) over a

different output range. Kornfeld does not explicitly disclose that, for the embodiment of figure 2, each amplifier has a gain that is unique as compared to all other discrete amplitude amplifiers. However, Kenington teaches, in strictly analogous art, the use of an amplifier arrangement (fig. 1) with a plurality of discrete amplifiers (fig. 1, refs. 124a-124n). Kenington discloses that the amplifiers are arranged in gain such that "each is different and such that the output ratings of the selectable amplifiers comprise a sequence wherein each successive output rating is twice the preceding one" (¶ 0010). Kenington discloses that such an arrangement of successive output rating amplifiers can be appropriately switched to "create a very high efficiency linear amplifier" (¶ 0002). Therefore, it would have been obvious to one having ordinary skill in the art at the time which the invention was made that Kornfeld's "identical gain" amplifiers "A1-A4" could be replaced by Kenington's amplifiers having unique gains as compared to each other.

Further regarding claim 1, Kornfeld discloses that "an RF transmit modulator" (col. 4, line 51) supplies the "INPUT SIGNAL" (i.e. fig. 2) to the actuator (fig. 2, ref. 44). Such modulator is connected in series with each of Kornfeld's discrete amplitude amplifiers (fig. 2, "A1-A4"). Kornfeld does not disclose, however, that every discrete amplitude amplifier is coupled to a separate modulator. However, Chethik illustrates, in strictly analogous art, an alternative embodiment of a power synthesizer (fig. 1). Chethik suggests, after passing data through an actuator (fig. 1, ref. 15), pairing one modulator (i.e. fig. 1, ref. 12) in series with each of a plurality of modulators (fig. 1, ref. 13). Therefore, it would have been obvious to one having ordinary skill in the art at the time which the invention was made that Kornfeld's single modulator (which is not

shown) could be divided into a plurality of modulators each applied in series with one of the amplifiers of Korfeld in view of Kenington as suggested by Chethik because such alternative embodiments are well known and ubiquitous in the art and one skilled in the art would have found it obvious to try alternative embodiments as a matter of design preference.

Regarding claim 2, Kornfeld in view of Kenington and Chethik disclose the limitations of claim 1 as applied above. Further, Kenington discloses that each of the n discrete amplitude amplifiers comprises a constant envelope amplifier (¶ 0003).

Regarding claim 5, Kornfeld in view of Kenington and Chethik disclose the limitations of claim 1 as applied above. Further, Kornfeld discloses a power combiner (fig. 2, ref. 48) having parallel inputs coupled to outputs of the n discrete amplitude amplifiers (fig. 2).

Regarding claim 6, Kornfeld in view of Kenington and Chethik disclose the limitations of claim 1 as applied above. Further, the combination of Kornfeld in view of Kenington and Chethik discloses the remaining limitations of the claims as applied in claim 1 above.

Regarding claim 7, Kornfeld in view of Kenington and Chethik disclose the limitations of claim 1 as applied above. Further, Kornfeld discloses a discrete amplitude generator (fig. 2, ref. 44) having parallel outputs coupled to inputs of the n stages, said discrete amplitude generator adapted to convert a real input (fig. 2, "INPUT SIGNAL") to parallel binary outputs (fig. 2, output of 44). As broadly as claimed, the input data is considered to be "real input" data.

Regarding claim 23, Kornfeld in view of Kenington and Chethik disclose the limitations of the claim as applied to claim 1 above. Specifically, the "modulating" of claim 1 covers the claimed "controlling a phase" of claim 23, and Kornfeld's output network (fig. 2, ref. 48) performs combining the "*n* phase controlled and amplified bits" in a "circuit matter".

Regarding claim 29, Kornfeld in view of Kenington and Chethik disclose the limitations of claim 23 as applied above. Further, Kornfeld discloses that combining the amplified phase controlled bits in a circuit manner comprises combining all of the n amplified and phase controlled bits with at least one power combiner (fig. 2, ref. 48) prior to transmission.

Regarding claim 30, Kornfeld in view of Kenington and Chethik disclose the limitations of claim 1 as applied above. Further, the amplifiers of Kornfeld in view of Kenington have determined gain properties such that each apply a gain that differs from that applied by another nearest-power discrete power amplifier by a fixed amount (Kenington; i.e. "twice", ¶ 0010).

Regarding claim 31, Kornfeld in view of Kenington and Chethik disclose the limitations of claim 30 as applied above. Kornfeld in view of Kenington and Chethik do not explicitly disclose that the difference between each pair of nearest-power discrete amplifiers has a gain difference of 6db. However, in the instant specification, the use of the particular gain difference of 6db is not presented as solving any particular problem or consisting of any particular inventive novelty. Furthermore, one skilled in the art would expect that, depending upon a desired design consideration, the fixed difference

could be of any value while still maintaining the functionality and spirit of the invention. Therefore, it would have been obvious to one having ordinary skill in the art at the time which the invention was made to use a fixed difference of 6db, or any other relative difference, between the nearest-power discrete amplifiers depending upon a desired design choice.

Regarding claim 34, Kornfeld in view of Kenington and Chethik disclose the limitations of claim 23 as applied above. Further, because the amplifiers of Kenington and have determined gain properties (¶ 0010), they each apply a gain that differs from that applied by another nearest-power discrete power amplifier by a fixed amount (i.e. two times).

Regarding claim 35, Kornfeld in view of Kenington and Chethik disclose the limitations of claim 34 as applied above. Further, the remaining limitations of the claim are considered an obvious design variation as applied to claim 31 above.

Regarding claim 36, Kornfeld in view of Kenington and Chethik disclose the limitations of the claim as applied to claim 1 above.

Regarding claim 37, Kornfeld in view of Kenington and Chethik disclose the limitations of claim 36 as applied above. Further, Kornfeld in view of Kenington and Chethik disclose the remaining limitations of the claim as applied to claim 1 above.

5. Claims 3, 4, and 25-27 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Chethik in view of Kenington, Kornfeld, and Nguyen et al (U.S. Pat. No. 6148040; "Nguyen" – previously cited).

Regarding claim 3, Kornfeld in view of Chethik disclose the limitations of claim 1 as applied above. Chethik in view of Kenington and Kornfeld do not disclose that the modulators perform continuous phase modulation. However, various types of modulation are well known and accepted in the art and Nguyen teaches the use of continuous phase modulation (col. 1, lines 30-45). Nguyen teaches that, "because the CPM signal has a constant envelope, a power amplifier can be operated at maximum power without affecting the spectrum of the signal" (col. 1, lines 39-41). Therefore, it would have been obvious to one having ordinary skill in the art at the time which the invention was made that the modulation technique utilized by Kornfeld in view of Kenington and Chethik could be replaced by a continuous phase modulation technique as taught by Nguyen because it permits power amplifiers to be utilized with the best power efficiency.

Regarding claim 4, Kornfeld in view of Kenington, Chethik and Nguyen disclose the limitations of claim 3 as applied above. Further, Nguyen discloses that each of the CPM modulators comprise pulse amplitude modulators (col. 2, lines 10-20).

Regarding claim 25, Kornfeld in view of Kenington and Chethik disclose the limitations of claim 23 as applied above. Further, Kornfeld in view of Kenington, Chethik and Nguyen disclose the remaining limitations of the claim as applied to claim 3 above.

Regarding claim 26, Kornfeld in view of Kenington, Chethik and Nguyen disclose the limitations of claim 25 as applied above. Further, Nguyen discloses that each of the CPM modulators comprise pulse amplitude modulators (col. 2, lines 10-20).

Regarding claim 27, Kornfeld in view of Kenington, Chethik and Nguyen disclose the limitations of claim 25 as applied above. Kornfeld in view of Kenington, Chethik and Nguyen do not explicitly disclose that the modulator performs Gaussian Minimum Shift Keying. However, various types of modulation are well known and accepted in the art and Nguyen teaches the use of continuous phase modulation; GMSK in particular (col. 1, lines 30-45). Nguyen teaches that, "because the GMSK signal has a constant envelope, a power amplifier can be operated at maximum power without affecting the spectrum of the signal" (col. 1, lines 39-41). Therefore, it would have been obvious to one having ordinary skill in the art at the time which the invention was made that the modulation used by Kornfeld in view of Kenington and Chethik could be replaced by a continuous phase GMSK modulation technique as taught by Nguyen because it enables power amplifiers to be utilized with the best power efficiency. In the case of using a CPM/GMSK modulation technique, it follows that the constant amplitude amplifiers are utilized because they always amplify a constant amplitude signal.

6. Claims 9 and 24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kornfeld in view of Kenington, Chethik and Porco et al (U.S. Pat. No. 7020215; "Porco" – previously cited).

Regarding claim 9, Kornfeld in view of Kenington and Chethik disclose the limitations of claim 1 as applied above. Kornfeld in view of Kenington and Chethik do not disclose that each of the n stages has an output coupled to an input of a separate transmit antenna. However, Porco, discloses, in an analogous field of art, the use of separate transmission antennas (fig. 2, refs. 253-256) respective to a number of

amplifiers (fig. 2, refs. 245-248). Therefore, it would have been obvious to one having ordinary skill in the art at the time which the invention was made that each of the n stages of Kornfeld could be coupled directly to an input of a separate antenna as illustrated by Porco because the additional antenna diversity can be useful for wireless communication and such use is ubiquitous in the art.

Regarding claim 24, Kornfeld in view of Kenington and Chethik disclose the limitations of claim 23 as applied above. Further, Kornfeld in view of Kenington, Chethik and Porco disclose the remaining limitations of the claim as applied to claim 9 above.

7. Claims 12-17, 22, 32, and 33 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hosur et al (U.S. Pub. No. 2003/0152023; "Hosur" – previously cited) in view of Kornfeld, Kenington and Chethik.

Regarding claim 12, Hosur discloses a transmitter (fig. 2) comprising an inverse fast fourier transmit block (fig. 2, ref. 20), said IFFT block adapted to convert an amplitude modulated input to a bit modulated output. However, Hosur does not explicitly disclose a power synthesizer block as applied to claim 1 above. However, Kornfeld in view of Kenington and Chethik disclose such a power synthesizer block as applied to claim 1 above. Further, the advantage to the power synthesizer of Kornfeld in view of Kenington and Chethik is the highly linear amplifier output created over a wide range. Therefore, it would have been obvious to one having ordinary skill in the art at the time which the invention was made that the RF front end amplifier of Hosur (i.e. fig. 2, ref. 26) could be replaced by the power synthesizer block of Kornfeld in view of

Kenington and Chethik because it provides an exemplary amplifier with a wide linear range of operation.

Regarding claim 13, Hosur discloses a transmitter (fig. 2) comprising, in series, an encoder (12), a serial to parallel converter (18), a parallel to serial converter (22) for outputting a digital signal at baseband, and at least one transmit antenna (AT_{TX}). Hosur discloses an RF front end power amplifier (fig. 2, ref. 26) but does not explicitly disclose a power synthesizer block comprising at least two discrete amplifier stages in parallel, and each discrete amplifier stage comprising a discrete amplitude amplifier for applying a gain that differs from that applied by each other discrete amplitude amplifier. However, Kornfeld in view of Kenington and Chethik disclose such a power synthesizer block as applied to claim 1 above. Further, the advantage to the power synthesizer of Kornfeld in view of Kenington and Chethik is the highly linear amplifier output created over a wide range. Therefore, it would have been obvious to one having ordinary skill in the art at the time which the invention was made that the RF front end amplifier of Hosur (i.e. fig. 2, ref. 26) could be replaced by the power synthesizer block of Kornfeld in view of Kenington and Chethik because it provides an exemplary amplifier with a wide linear range of operation.

Regarding claim 14, Hosur in view of Kornfeld, Kenington and Chethik disclose the limitations of claim 13 as applied above. Further, in the combination of Hosur in view of Kornfeld, Kenington and Chethik; no digital to analog converter is utilized between the parallel to serial converter and the power synthesizer block (Hosur; fig. 2).

Regarding claim 15, Hosur in view of Kornfeld, Kenington and Chethik disclose the limitations of claim 13 as applied above. Further, the combination of Kornfeld in view of Kenington and Chethik, as applied in claim 1 above, is such that each a discrete amplifier and a modulator are series with one another.

Regarding claim 16, Hosur in view of Kornfeld, Kenington and Chethik disclose the limitations of claim 15 as applied above. Further, Hosur discloses an inverse fast fourier transform IFFT block (fig. 2, ref. 20) disposed between the serial to parallel converter (fig.2, ref. 18) and the parallel to serial converter (fig. 2, ref. 22), the power synthesizer block (of Kornfeld in view of Kenington and Chethik) further comprising a discrete amplitude generator (Kornfeld; fig. 2, ref. 44) for converting a real valued input from the IFFT block to parallel binary outputs, each parallel binary output coupled to an input of a modulator (as applied to the combination of Kornfeld in view of Kenington and Chethik). As broadly as claimed, the input data is considered to be "real input" data.

Regarding claim 17, Hosur in view of Kornfeld, Kenington and Chethik disclose the limitations of claim 15 as applied above. Further, the power synthesizer block of Kornfeld in view of Kenington and Chethik comprises at least one power combiner (Kornfeld; fig. 2, ref. 48) coupling an output of each of the at least two discrete amplifier stages with the at least one transmit antenna (Hosur; fig. 2, "AT_{TX}").

Regarding claim 22, Hosur in view of Kornfeld, Kenington and Chethik disclose the limitations of claim 15 as applied above. Further, Hosur discloses that the transmitter is disposed in one of a base or mobile station (fig. 1).

Regarding claim 32, Hosur in view of Kornfeld, Kenington and Chethik disclose the limitations of claim 13 as applied above. Further, Kornfeld's amplifiers have determined gain properties such that each apply a gain that differs from that applied by another nearest-power discrete power amplifier by a fixed amount (col. 5, lines 10-30).

Regarding claim 33, Hosur in view of Kornfeld, Kenington and Chethik disclose the limitations of claim 13 as applied above. Hosur in view of Kornfeld, Kenington and Chethik do not explicitly disclose that the difference between each pair of nearest-power discrete amplifiers has a gain difference of 6db. However, in the instant specification, the use of the particular gain difference of 6db is not presented as solving any particular problem or consisting of any particular inventive novelty. Furthermore, one skilled in the art would expect that, depending upon a desired design consideration, the fixed difference could be of any value while still maintaining the functionality and spirit of the invention. Therefore, it would have been obvious to one having ordinary skill in the art at the time which the invention was made to use a fixed difference of 6db, or any other relative difference, between the nearest-power discrete amplifiers depending upon a desired design choice.

8. Claims 18, 19, and 28 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hosur in view of Chethik, Kenington, Kornfeld, and Nguyen.

Regarding claim 18, Hosur in view of Kornfeld, Kenington and Chethik disclose the limitations of claim 15 as applied above. Hosur in view of Kornfeld, Kenington and Chethik do not disclose that the modulators perform continuous phase modulation. However, various types of modulation are well known and accepted in the art and

Nguyen teaches the use of continuous phase modulation (col. 1, lines 30-45). Nguyen teaches that, "because the CPM signal has a constant envelope, a power amplifier can be operated at maximum power without affecting the spectrum of the signal" (col. 1, lines 39-41). Therefore, it would have been obvious to one having ordinary skill in the art at the time which the invention was made that the modulation technique utilized by Hosur in view of Kornfeld, Kenington and Chethik could be replaced by a continuous phase modulation technique as taught by Nguyen because it permits power amplifiers to be utilized with the best power efficiency.

Regarding claim 19, Hosur in view of Kornfeld, Kenington and Chethik disclose the limitations of claim 15 as applied above. Hosur in view of Kornfeld, Kenington and Chethik do not disclose that amplifiers are constant envelope amplifiers. However, various types of modulation are well known and accepted in the art and Nguyen teaches the use of continuous phase modulation; GMSK in particular (col. 1, lines 30-45). Nguyen teaches that, "because the GMSK signal has a constant envelope, a power amplifier can be operated at maximum power without affecting the spectrum of the signal" (col. 1, lines 39-41). Therefore, it would have been obvious to one having ordinary skill in the art at the time which the invention was made that the modulation used by Hosur in view of Kornfeld, Kenington and Chethik could be replaced by a continuous phase GMSK modulation technique as taught by Nguyen because it enables power amplifiers to be utilized with the best power efficiency. In the case of using a CPM/GMSK modulation technique, it follows that the constant amplitude amplifiers are utilized because they always amplify a constant amplitude signal.

Regarding claim 28, Hosur in view of Kornfeld, Kenington and Chethik disclose the limitations of claim 15 as applied above. Further, Hosur discloses, previous to providing a separate bit of a bit stream (Kornfeld; i.e. output of fig. 2, ref. 44; Kornfeld in view of Chethik replacing Hosur fig. 2, ref. 26), converting an amplitude modulated signal (fig. 2, ref. 16; ¶ 0017; pg. 3, left col., line 40) to the bit stream.

9. Claims 20 and 21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hosur in view of Kornfeld, Kenington, Chethik, and Porco.

Regarding claim 20, Hosur in view of Kornfeld, Kenington and Chethik disclose the limitations of claim 15 as applied above. Hosur in view of Kornfeld, Kenington and Chethik do not disclose that each of the amplifier stages has an output coupled to an input of a separate transmit antenna. However, the use of separate transmission antennas is well known in the art as illustrated by Porco (fig. 2, refs. 253-256). Therefore, it would have been obvious to one having ordinary skill in the art at the time which the invention was made that each of the amplifier stages of Hosur in view of Kornfeld, Kenington and Chethik could be coupled directly to an input of a separate antenna as illustrated by Porco because the additional antenna diversity can be useful for wireless communication and is ubiquitous in the art.

Regarding claim 21, Hosur in view of Kornfeld, Kenington, Chethik, and Porco disclose the limitations of claim 20 as applied above. Further, they disclose the remaining limitations of claim 21 because, n=3 in the combination.

Allowable Subject Matter

10. Claims 10, 11, and 38-41 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON M. PERILLA whose telephone number is (571)272-3055. The examiner can normally be reached on M-F 8-5 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh M. Fan can be reached on (571) 272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jason M Perilla/
Primary Examiner, Art Unit 2611
October 8, 2008

/Jmp/